

<b>2013 Prescriptive Certificate of Compliance: Tank Water Heater</b>		<b>CF1R-ALT-ResTankWaterHeater</b>
Project Address:	Climate Zone: <b>12</b>	Permit #

Enforcement Agency: <b>City of Fairfield</b>	Date:
Installation Type: <input type="checkbox"/> New / Additional <input type="checkbox"/> Replacement	Water Heater Location: <input type="checkbox"/> Garage <input type="checkbox"/> Exterior <input type="checkbox"/> Habitable Space <input type="checkbox"/> Other

<b>WATER HEATER INFORMATION / MANUFACTURER'S SPECIFICATIONS <sup>1</sup></b>							
A	B	C	D	E	F	G <sup>2</sup>	H
<b>Water Heater Identification</b> (Manufacturer, Model, etc.)	<b>System Type</b>	<b>Water Heater Type</b>	<b>Number of Water Heaters</b>	<b>Fuel Type</b>	<b>Volume [V] (Gallons)</b>	<b>Rated Input (Btu/Hr)</b>	<b>Rated Energy Factor [EF]</b>
	Domestic Hot Water	Small Storage Tank	1	Natural Gas			
<p>1. Required "Prescriptive" information has been auto-populated and may not be changed. If this form does not apply, another method of energy compliance must be used.</p> <p>2. This value is limited to 75,000 maximum per CEC Section 150.1(C)(8)A.</p>							

<b>WATER HEATER VERIFICATION</b>			
J <sup>3,5</sup>	K <sup>4</sup>	L <sup>4</sup>	M
<b>Water Heaters Manufactured Prior to 4/16/15</b>	<b>Water Heaters Manufactured After 4/16/15</b>	<b>Water Heaters Manufactured After 4/16/15</b>	<b>Compliance Check</b>
<b>Minimum Required [EF] = 0.67 – 0.0019 x [V]</b>	<b>For Volume [V] ≤ 55 Gal, Minimum Required [EF] = 0.675 – 0.0015 x [V]</b>	<b>For Volume [V] &gt; 55 Gal, Minimum Required [EF] = 0.8012 – 0.00078 x [V]</b>	<b>Is Column [H] ≥ Column [J, K or L]?</b>
<p>3. Fill in column J only for water heaters installed after 4/16/15, but manufactured per the 2008 Energy Standards (allowed to be sold off per the National Appliance Energy Conservation Act, or NAECA, updated in 2010. No distinction was made as to the volume of the tank.</p> <p>4. Fill in either column K or L for water heaters manufactured after 4/16/15, which are required to be more efficient. Note the new distinction that is made at the 55 gallon volume.</p> <p>5. Per CEC Section 150.0(j)1(A), storage gas water heaters with an EF equal to or less than the current federal minimum standards (i.e. as in Columns K &amp; L) shall be externally wrapped with insulation having an installed thermal resistance of R-12 or greater.</p>			

<b>WATER HEATER PIPE INSULATION</b>
<p><b>CA Energy Code 150.0(j)2(A):</b> All domestic hot water system piping conditions <b>listed below</b>, whether buried or unburied, must be insulated per Table 120.3-A. (piping &lt; 1" diameter shall have 1" thick pipe insulation, and piping ≥ 1" diameter shall have 1.5" thick pipe insulation):</p> <ul style="list-style-type: none"> <li>i. The first 5 feet (1.5 meters) of hot and cold water pipes from the storage tank.</li> <li>ii. All piping with a nominal diameter of ¾ inch (19 millimeter) or larger.</li> <li>iii. All piping associated with a domestic hot water recirculation system regardless of the pipe diameter (except for water heater replacements per Section 150.2(b)1(G), existing inaccessible piping shall not require pipe insulation).</li> <li>iv. Piping from the heating source to storage tank or between tanks.</li> <li>v. Piping buried below grade.</li> <li>vi. All hot water pipes from the heating source to the kitchen fixtures.</li> </ul> <p>Exception 5 to Section 150.0(j)2: Piping installed in attics with a minimum of 4 inches (10 cm) of attic insulation on top of the piping shall not be required to have pipe insulation.</p>

<b>Declaration Statement</b>	
<ul style="list-style-type: none"> <li>I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is accurate and complete.</li> <li>I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Parts 1 and 6 of the California Code of Regulations.</li> </ul>	
Name:	Signature:
Company:	Date:
Address:	License:
City/State/Zip:	Phone:

**For assistance or questions regarding the Energy Standards, contact the Energy Hotline at: 1-800-772-3300.**

In addition to the 2013 Building Energy Efficiency Standards noted previously, below are some highlights of the minimum 2013 CA Plumbing Code requirements for water heater installations:

**Section 504.6 Temperature, Pressure, and Vacuum Relief Devices.** The installation of temperature, pressure, and vacuum relief devices or combinations thereof, and automatic gas shutoff devices, shall be installed in accordance with the terms of their listings and the manufacturer's instructions. A shutoff valve shall not be placed between the relief valve and the water heater or on discharge pipes between such valves and the atmosphere. The hourly Btu discharge capacity or the rated steam relief capacity of the device shall be not less than the input rating of the water heater.

**Section 608.5 Drains.** Relief valves located inside a building shall be provided with a drain not smaller than the relief valve outlet, of galvanized steel, hard-drawn copper piping and fittings, CPVC, PP, or listed relief valve drain tube with fittings that will not reduce the internal bore of the pipe or tubing (straight lengths as opposed to coils) and shall extend from the valve to the outside of the building, with the end of the pipe not more than two (2) feet (610 mm) nor less than six (6) inches (152 mm) aboveground or the flood level of the area receiving the discharge and pointing downward. Such drains shall be permitted to terminate at other approved locations. Relief valve drains shall not terminate in a building's crawl space. No part of such drain pipe shall be trapped or subject to freezing. The terminal end of the drain pipe shall not be threaded.

**Section 507.4 Drainage Pan.** Where a water heater is located in an attic, attic-ceiling assembly, floor-ceiling assembly, or floor-subfloor assembly where damage results from a leaking water heater, a watertight pan of corrosion-resistant materials shall be installed beneath the water heater with not less than  $\frac{3}{4}$  of an inch (20 mm) diameter drain to an approved location.

**Section 507.5 Relief Valve Discharge.** Discharge from a relief valve into a water heater pan shall be prohibited.

**Section 507.2 Seismic Provisions.** Water heaters shall be anchored or strapped to resist horizontal displacement due to earthquake motion. Strapping shall be at points within the upper one third ( $\frac{1}{3}$ ) and lower one-third ( $\frac{1}{3}$ ) of its vertical dimensions. At the lower point, a minimum distance of four (4) inches (102 mm) shall be maintained above the controls with the strapping.

**Section 507.13 Installation in Garages.** Appliances in garages and in adjacent spaces that open to the garage and are not part of the living space of a dwelling unit shall be installed so that burners and burner-ignition devices are located not less than 18 inches (457 mm) above the floor unless listed as flammable vapor ignition resistant.

**Section 1211.8 Sediment Trap.** Where a sediment trap is not incorporated as a part of the appliance, a sediment trap shall be installed downstream of the appliance shutoff valve as close to the inlet of the appliance as practical at the time of appliance installation. The sediment trap shall be either a tee fitting with a capped nipple in the bottom outlet, as illustrated below, or other device recognized as an effective sediment trap.

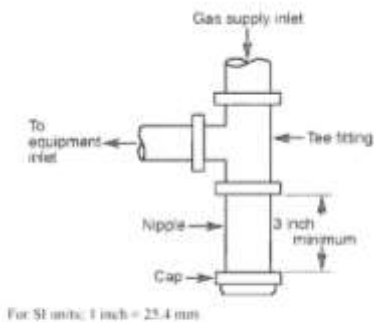


FIGURE 1211.8  
METHOD OF INSTALLING A  
TEE FITTING SEDIMENT TRAP  
[NFPA 54: FIGURE 9.6.7]